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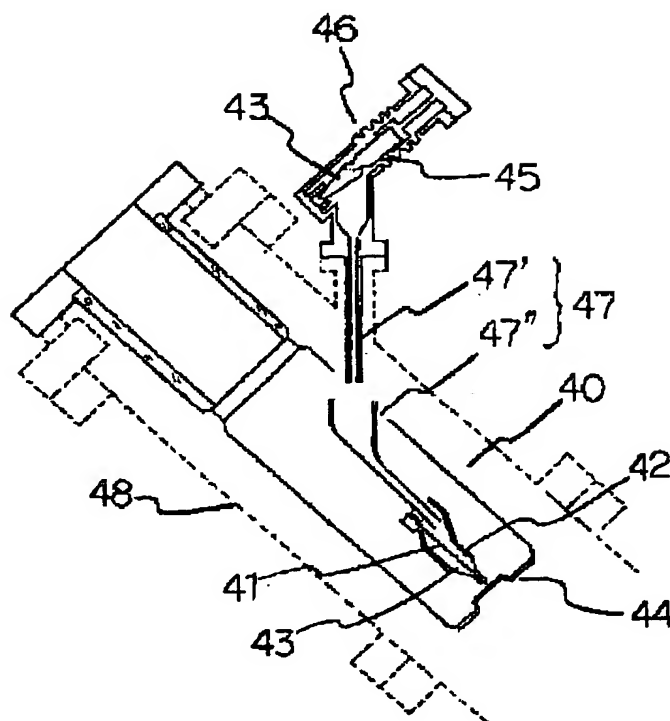
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APPLICANT : HITACHI LTD;

INVENTOR : SHICHI HIROYASU;

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TITLE : CESIUM LIQUID METAL SOURCE,  
OPERATION METHOD AND HANDING  
METHOD THEREOF, SECONDARY ION  
MASS ANALYZING DEVICE USING  
CESIUM LIQUID METAL ION SOURCE,  
AND FOCUSING ION BEAM DEVICE



ABSTRACT : PURPOSE: To introduce sealed cesium into a reservoir with good efficiency and to obtain a cesium liquid metal ion source of a long lifetime by holding an ampul before rupture in an ampul rupture part in an inclined state relative to a level.

CONSTITUTION: In a cesium liquid metal ion source 40 composed of an ampul 45, an ampul rupture part 46, a reservoir 42, an emitter 41 and a leader electrode 44 while using cesium 43 as an ion material, the ampul 42 before rupture in the rupture part 46 is held while being inclined to a horizontal plane. In this way, the reservoir 42 can be charged with the cesium 43 surely and with good efficiency by holding the ampul 45 with an inclination and rupturing it so as to obtain cesium liquid metal ions 40 having a long lifetime. Further, the greater part of cesium 43 sealed in the ampul 45 is accumulated below a part to be ruptured of the ampul 45 and an inclination angle of the ampul 45 set up in the rupture part 46 is desirably to be 10 to 80°C to the horizontal plane.

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